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(54) CABINET FOR PLUG-IN UNITS OF ELECTRONIC APPARATUS

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(57) Claim 1. An electronic apparatus plug-in storage cabinet comprising a frame including, front and rear upright corner elements supporting a doqr at a front thereof and at least side panels therebetween, characterised in that the upright corner elements at the rear of the frame form hollow ducts extending the full height of the cabinet and an inner wall of each duct is formed with apertures therethrough in longitudinally spaced apart intervals into which are mounted externally accessible female connectors, wires associated with the female connectors being housed within the associated duct, the wiring in one duct being common to all said female connectors thereof and terminating at a mains electrical supply connection externally of said duct whereby mains electrical power is available at each of the female connectors of said one duct, and the wiring in the remaining duct providing a plurality of separate telecommunication inlet and outlet pairs connected one to each connector of that duct.

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PETTY PATENT SPECIFICATION

(ORIGINAL)

TO BE COMPLETED BY APPLICANT

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Petty Patent Specification for the invention entitled:

"IMPROVEMENTS IN OR RELATING TO ELECTRONIC COMPONENT STORAGE CABINETS"

The following statement is a full description of this invention, including the best method of performing it known to ~~xx~~ us

* Note: The description is to be typed in double spacing, pica type face, in an area not exceeding 250 mm in depth and 160 mm in width, on tough white paper of good quality and it is to be

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This invention relates to cabinets and in particular to cabinets for storage of plug-in units of electronic apparatus.

A problem often encountered when using electronic apparatus is that the associated wiring, for example electrical power and telecommunication inlet and outlet wires, often become untidy and therefore confusing to follow, making it difficult to connect an electronic unit to the correct wires.

It is an object of this invention to go someway towards overcoming the above problem by providing a cabinet that is adapted by way of a bank of inlet and outlet terminals (connectors), to help keep wiring associated therewith in tidy order.

In one aspect of this invention there is provided an electronic apparatus plug-in storage cabinet comprising a frame including, front and rear upright corner elements supporting a door at a front thereof and at least side panels therebetween, characterised in that the upright corner elements at the rear of the frame form hollow ducts extending the full height of the cabinet and an inner wall of each duct is formed with apertures therethrough in longitudinally spaced apart intervals into which are mounted externally ~~located~~ accessible. female connectors, wires associated with the female connectors being housed within the associated duct, the wiring in one duct being common to all said female connectors thereof and terminating at a mains electrical supply connection externally

of said duct whereby mains electrical power is available at each of the female connectors of said one duct, and the wiring in the remaining duct providing a plurality of separate telecommunication inlet and outlet pairs connected

5. one to each connector of that duct

~~wiring in the remaining duct providing a plurality~~ of separate telecommunication inlet and outlet pairs ~~associated one pair to each terminal of that duct.~~ 9/6/83

In further describing this invention reference is made to a preferred embodiment which should be considered in all its novel aspects and which is given by way of example only, with reference to the accompanying drawings, in which:

Figure 1 illustrates a partly schematic perspective rear view of the cabinet showing electrical power inlet and outlets.

Figure 2 illustrates a partly schematic perspective rear view of the cabinet showing telecommunication inlet and outlets.

In a preferred embodiment of the invention a cabinet 10 is provided for storage of electronic apparatus (not shown) The apparatus is/are preferably provided with connectors 12, for example "male" plugs, for ease of connection to a power or a telecommunciation supply or to other equipment. The cabinet 10 is of a generally known configuration comprising a substantially rectangular frame, side panels, and at least one door. In a preferred embodiment of the cabinet 10, the frame is formed from lengths of folded steel having a substantially hollow section, whilst the side panels 14 are formed from sheet steel. The frame preferably includes upright corner elements $16^{\underline{a}}$ and $16^{\underline{b}}$. The upright corner elements $16^{\underline{a}}$ preferably support a swing door 18 at a front of the cabinet 10. It is preferred that the swing door 18 fits snuggly in the frame, to help preven

dust and other matter from entering the cabinet 10. To further help in preventing the entry of matter, it is preferred that the swing door 18 is glazed thus allowing the contents of the cabinet 10 to be viewed without opening the swing door 18. The cabinet preferably incorporates a conventional mounting rack system for mounting of the electronic apparatus. The upright corner elements 16^{a} and 16^{b} are therefore provided with a plurality of modularly positioned apertures (not shown), formed therethrough in longitudinally spaced apart relationship. Expediently at least one shelf (not shown) is provided for electrical apparatus that is not tailored to this system.

The upright corner elements 16^{b} disposed at the rear of the cabinet 10 are preferably of a larger cross sectional area than the front corner elements 16^{a}. An inner wall 20 of each rear corner element 16^{b} is provided with a means to enable electronic apparatus stored in the cabinet to be readily connected to mains electrical, and to telecommunication supplies. In a preferred embodiment of the cabinet 10, the inner wall 20 of each corner element 16^{b} is provided with a plurality of apertures in longitudinally spaced apart intervals ~~Wire terminal units~~ Femail connectors, preferably in the form of conventional three point power sockets and also standard telecommunication sockets are mounted within the apertures of respective corner elements 16^{b}. Supply wires 22 thereto are housed within each of the rear corner elements 16^{b}. Preferably the wiring in each rear corner element 16^{b} is common to all terminals

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thereof such that mains electrical power is supplied to the outlets 24 of one rear corner element 16b via supply wire 26, as more particularly shown in Figure 1. A pair of telecommunication inlet and outlet wires are supplied to each integrally formed inlet and outlet 28 of the other rear corner element 16b, via inlet and outlet connector sockets 30, as more particularly shown in Figure 2. In an alternative embodiment of the cabinet 10, the ~~wire terminal units~~ Femail conductors can be pre-fabricated into one integral panel to be affixed to the inner wall 20 of each rear corner element 16b.

In use, electronic apparatus is housed in conventional modular mounting rack containers (not shown) and is installed through the front of the cabinet 10. The containers are mounted in the associated apertures of the uprights 16a and 16b, by means of suitable fasteners. The connectors 12 of the electronic apparatus are then inserted into the appropriate mains electrical femail outlets 24 and telecommunications outlets 28. The telecommunications outlets 28 are preferably permanently connected via the inlet and outlet sockets 30 to main telegraph lines. The mains electrical inlet 26 is connected to an in situ wall or floor mains electrical supply outlet.

The claim defining the invention is as follows:-

An electronic apparatus plug-in storage cabinet comprisin a frame including, front and rear upright corner elements supporting a door at a front thereof and at least side panels therebetween, characterised in that the upright corner element at the rear of the frame form hollow ducts extending the full height of the cabinet and an inner wall of each duct is formed apertures therethrough in longitudinally spaced apart intervals into which are mounted externally accessible female connectors, wires associated with the female connectors being housed within the associated duct, the wiring in one duct being common to all said female connectors thereof and terminating at a mains electrical supply connection externally of said duct whereby mains electrical power is available at each of the female connectors of said one duct, and the wiring in the remaining duct providing a plurality of separate telecommunication inlet and outlet pairs connected one to each connector of that duct.

Dated this 25th day of May, 1983.

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By their Patent Attorneys,
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FIGURE 1

FIGURE 2